

September 19, 2016

PROFESSOR VICTOR FERREIRA, Chair
Department of Psychology

SUBJECT: Undergraduate Program Review for the Department of Psychology

Dear Professor Ferreira,

The Undergraduate Council discussed the Department of Psychology's 2016 Undergraduate Program Review. The Council supports the findings and recommendations of the review subcommittee and appreciates the thoughtful and proactive response from the Department. The Council's comments centered on the following:

Teaching Assistants (TAs). In their report, the program review subcommittee noted the role of TAs in the Department is minimal. The subcommittee reported that TAs in the Departments attend lectures, hold office hours, and grade papers, but that a large number of TAs do not run their own discussion sections (the Department's response indicated that 25% of TAs hold sections). The subcommittee felt that this deprived the graduate student TAs of crucial teaching experience that would normally be achieved by leading informal discussions with undergraduates. Undergraduate students are also not served because they do not get the opportunity to engage in informal discussion of materials and ideas. The Undergraduate Council opined that a more meaningful and educational experience could be had by graduate student TAs and the undergraduate student population if TAs were given the opportunity to teach more/hold more sections, while decreasing their responsibility to perform duties that a grader might be able to do.

Undergraduate program rigor. The rigor of the Bachelor of Science (B.S.) program was discussed, and the subcommittee noted with the shift towards fields like data analytics and data science, the Department should consider increasing the programming requirement to CSE 7 *Introduction to Programming with Matlab*, instead of relying on CSE 3 *Fluency in Information Technology*. The Council agreed with the subcommittee's assessment and opined that a suitable programming course should do more than introduce students to basic concepts of computers and networks, which is what CSE 3 provides.

For the Bachelor of Arts (B.A.), the Council was in favor of the subcommittee's recommendation that PSYC 60 *Introduction to Statistics* and PSYC 70 *Research Methods in Psychology* become a two-part sequence. Requiring the sequence would strengthen the rigor of the B.A. Another item of consideration would be to require more writing for the B.A., specifically American Psychological Association (APA)-style term papers. The concern of the subcommittee was that the B.A. was just the B.S., but with less quantitative requirements. Creating a more rigorous B.A. program, through incorporating writing and strengthening statistical requirements, would revive the identity of the B.A. program, and create a major that is more distinctly different from the B.S. program.

Diversity. The subcommittee highlighted the concern that the Department might benefit from some assistance with diversity recruitment efforts. The Council's recommendation for the Department is to convene a committee of faculty to investigate methods of attracting faculty from diverse backgrounds. This committee could reach out to other departments and campuses to gather some best practices, and coordinate with administrative offices at UC San Diego to seek out opportunities for hiring diverse faculty at the senior level. The increasingly diverse undergraduate student body would benefit from a faculty body that reflects the University's increasingly diverse student population. The hope is that, through formal and informal interactions between students and faculty, and mentorship gained through extracurricular experiences, the Department would encourage a pipeline for more students from diverse backgrounds to pursue a career in the field of Psychology.

The Council notes that TA usage and program rigor are carry-over issues from the Department's 2009 program review, and continue to be points of considerations. The Council will conduct its follow-up review of the Program in Fall Quarter 2017. At that time, our goal is to learn about the Program's progress in implementing the recommendations of the program review subcommittee and the Undergraduate Council. The Council extends its thanks to the Program for their engagement in this process and we look forward to the continued discussion.

Sincerely,

Geoffrey Cook, Chair
Undergraduate Council

cc: F. Ackerman
R. Continetti
T. Javidi
C. Padden
R. Rodriguez
K. Roy
B. Sawrey
M. Sidney

Department of Psychology

Undergraduate Program Review Report

Committee Members:

Professor and Program Review Chair Tara Javidi, Electrical and Computing Engineering, UC San Diego

Professor Virginia de Sa, Cognitive Science, UC San Diego

Professor Frédéric Theunissen, Psychology, UC Berkeley

Procedures:

The review committee was provided with the previous Department of Psychology Undergraduate Program Review from 2008, the department's self-study, learning objectives and an organization chart, in addition to various data collected by the Office of the Associate Vice Chancellor of Undergraduate Education—including courses taught, enrollments, and grade distribution; catalog copy, degree requirements, major vs minor statistics, student and faculty demographics, etc.

On the days of the interview (February 29th and March 1st, 2016), the committee met with the Department Chair, the Vice Chair of Undergraduate Studies, two groups of senate faculty members, one group of non-senate instructors, three lecturers, graduate teaching assistants, two undergraduate majors and minors, and the MSO and undergraduate coordinator.

Executive Summary:

After a day and a half of interviews, the committee was impressed by the health and appeal of the undergraduate program and the departments sincere effort to best serve such a large

population of students. The committee was also pleased by the department's efforts in an array of undertakings from a complete revamping of the undergraduate program, the continued involvement of students in extra-curricular activities, and an effective undergraduate advising office. These collective efforts have been recently initiated and lead by the department Chair and the Vice Chair of the Undergraduate Studies with the objective to ensure the relevance of the curriculum to the undergraduate educational mission of the department. The review committee applauds these efforts to address the concerns around students' needs.

The review committee was concerned by an array of issues raised by various constituents in the departments regarding 1) the necessary rigor in the undergraduate program, 2) an increasing emphasis on streamlining students through the major/minor with little experience to interact with the core (ladder-rank) faculty and even at the cost of lowering learning objectives, and 3) the seemingly divergent needs and identification of the students and those of the faculty (both academically as well as demographically). As a result, the committee made a series of minor and major recommendation to help the department in their effort to best serve students' long-term goals and needs.

The current committee is also fully in agreement with several issues and suggestions raised in the previous review (the relevant text is copied after our current review). In particular we remain concerned about: insufficient writing in the BA and BS track (but especially disappointing in the BA track), insufficient practical training (traditional lab and programming in R), and suboptimal TA usage. The fact that these issues have not been sufficiently addressed is troubling.

The committee also felt that the size of the student population served by the Psychology department provides a model and living laboratory for the campus as we move forward towards an academic world stressed by various financial and practical considerations such as shorter time-to-degree, interdisciplinarity, and the increasing importance of quantitative skills in traditional social science disciplines. In this light, the committee saw itself best positioned not only to help the department to remove obstacles they are facing in their service to a growing and diverse student body, but also to help the administration to think through questions of resource management in a sustainable manner to best balance various competing objectives and constraints.

The Psychology Undergraduate Program:

The Psychology department serves a very large student population through their degree programs (described below). In the past year, Chair Prof. Ferreira and Vice Chair Prof. Heyman have rededicated themselves to the notion that students should be able to tailor their education to better suit their interests and career goals. To that end, the Chair and Vice Chair fully overhauled the Psychology Undergraduate curriculum and programs, making a number of substantive changes, which have been approved by the Academic Senate with an effective term of FA15. The department offers both a BA and a BS degree, where the BS degree requires completion of additional lower-division courses in mathematics as well as a research methods course (Psych70). Bachelor of Science students also have the option to focus their studies on a specialization within Psychology. In addition, recently, joining forces with the Cognitive Science Department, a new major in Cognitive and Behavioral Neuroscience has been introduced as part of the Bachelor of Science (B.S.) program.

The inherent versatility of the program has long attracted many undergraduate students. However, the existing availability of various degree options (in form of BA, BS) as well as the

BS with specialization represents a change from the last review. The changes to the BA requirement were designed to make the major more inclusive and also reduce time to degree for students. Furthermore, the changes to the BS requirement as well as the introduction of the specializations bring the requirements in line with those of many peer institutions and fill a gap in the program regarding a research methods course. In addition to the twelve upper-division courses, all B.S. majors and the B.A. Honors students must fulfill a research experience requirement, comprising some combination of independent study courses (199s) and laboratory courses. For a B.S. degree in Cognitive and Behavioral Neuroscience, COGS199s may also contribute towards the research experience requirement. If a student completes two independent study courses, one must culminate in a research paper approved by the primary advisor. However, the primary advisor might not be in the chosen area of specialization, perhaps an indication of the limited number of advisors and opportunities available.

In terms of students needs and interest, there seems to be a consistent interest in the clinical aspects of psychology, a track which is not represented by the core (senate) faculty of the department. To address this, the revised curriculum includes a BS degree program with a specialization in Clinical Psychology. However, at this point sustainability of this program strongly depends on the advising staff and the Department Chair to connect the Department of Psychiatry. No permanent institutional support for this track is in place. The overall plan for the future of this specialization strongly relies on the availability of multiple L(P)SOE positions within the department, one of which would be dedicated to coordinating this track between general campus (Psychology) and School of Medicine. Furthermore, with the changes in the curriculum, it is not clear how the additional workload associated with the research experience requirement would be managed, given many faculty's explicit requirement regarding more rigorous mathematical skills. Again, here, it seems that the

needs and skillsets required by faculty is not in line with the kind of training and skillsets the students are trained for.

Finally, the department's demographic indicates an alarming mismatch between faculty and the students. The committee noted that while the undergraduate student demographics are only 21% white and 26% male, the majority of the faculty (including the more recent hires) are white and/or male. While the department has made some progress in hiring junior women faculty, the exclusion of all racial minorities on the faculty (historically under-represented or not) is unusual and problematic. For instance, while more than 65% of the undergraduate students self-identify as belonging to a racial minority group (primarily Asian, and/or Chicano/Latino), the faculty has a total of 1 Asian and 0 faculty of Chicano/Latino heritage. This is an area of concern for the majority of the undergraduate students who have noted and raised the problematic implication of this mismatch. This is particularly compounded by the large number of students who pass through the program with minimal exposure to the ladder-rank faculty due to their interest in the clinical track and/or their BA affiliation.

Recommendations to the Department and the Administration

The committee would like to commend the department on its achievements/improvements in the domain of undergraduate education. In particular, the committee was encouraged by the following:

1. Chair and Vice Chair of Undergraduate Studies recently completed an overhaul of the undergraduate program to ensure the relevance to the undergraduate educational mission of the department. These include:
 - a. Revisiting major/minor requirements
 - b. Addition of Psyc70 as a major requirement for BS students

- c. Research requirement for all of the BS students
2. Chair and Vice Chair of Undergraduate Studies have shown a continued support for the involvement of the undergraduate students in extra-curricular activities via the following two activities:
 - a. Cultivating PsiChi involvement
 - b. Cultivating the Internship program
3. The department has an extremely effective and engaged undergraduate advising office. All constituents in the department noted the value of the advising office. The list of their contributions, tasks, and duties are:
 - a. Serving transfer students effectively. The staff have reviewed the course contents at all California community colleges and updated articulation agreements. This allows them to prepare individual plans for all admitted transfer students based on the updated articulations.
 - b. Utilizing online resources for outreach, summer preparation, and concurrent advising. Serving the current students' needs in multiple ways including the instituting and formalizing a 1-1 advising program in the department.
 - c. Helping PsyChi in their events and activities (inviting speakers, etc).
 - d. Tracking popularity of classes to match the needs of the students and providing flexibility. In addition, the staff work with a large number of unit 18 lecturers,
 - e. Recognizing the students' interest and need to be prepared for graduate studies in clinical track; Identify and interface with instructors who have clinical expertise and can teach courses in the clinical subspecialty.

The committee makes the following minor recommendations that take advantage of some of the organizational structure that is already present and could address some of the concerns of the students and teachers alike.

1. Many of the undergraduate students are interested in **Clinical Psychology** and this is not a focus of the faculty's research. As part of the curriculum revision, the department has instituted a specialization in Clinical Psychology. We strongly applaud this effort as we believe that these diverse efforts need a stable organization. This stable organization might take the form of additional Adjuncts from Psychiatry, a long-term teaching position in Clinical Psychology and a regular scheduling of classes that are relevant to this specialization. These classes could include a subset of classes currently given by ladder-rank faculty with additional emphasis on Clinical Applications.
2. More **quantitative requirement for the BS track**. We heard from both students and faculty that the more rigorous math series (Math 20) was not necessarily the most appropriate training for the major *but* it was also clear that quantitative training is a very important and increasingly necessary (with the rise and prevalence of data analytics and data science) component of the undergraduate training, in particular in the BS track. We commend the addition of a research methods course (psych 70) to complement the statistical course (psych 60) at the lower division. We realize that these are new courses but it was also clear from our discussions that psych 60 and psych 70 need to be integrated and taught as a series. In addition, to potential differences in what is taught in those classes by different teachers a clear teaching objective and detailed syllabus should be created for this series. Since psych 60 is also a required course for the BA track, the department might want to consider adding 70 to the list of required courses for BA if the two are taught as a series (as

we recommend). The BS students are also required to take a programming class. This training is very important and we believe that it should be satisfied by (at a minimum) CSE 7 and not CSE 3. We encourage the department to consider teaching a programming/statistical analysis course in R, potentially with other departments as in done in the Psychology Department at UC Berkeley.

3. More **rigorous requirement for the BA track**. The BA track has the potential for exploiting some of the diversity in academic training that a major like psychology could offer but it fails to do so. As it stands it is just a watered-down version of the BS track. We encourage the department to add additional requirements for this track that would emphasize writing and critical thinking skills. Suggestions that we heard from students and faculty and that we support are including classes that require writing a significant APA style term paper and a course in the History of Psychology (or History of Science) that would take a critical view on the scientific process either from a philosophical or sociological perspective. Such boosting of the BA track can also benefit from collaborations with other departments/programs in the Division of Social Sciences (such as Ethnic Studies, Communications, and Critical Gender Studies) as well as the Division of Arts and Humanities (such as History, Performance Studies)
4. Students, faculty and student services were all positive about the addition of the BS degree programs with **Specializations**. We agree that it provides structure in the planned curriculum tracks while maintaining flexibility, diversity, and breadth. However, the committee believes that the department can further utilize this structure to address some of the issues raised by various constituencies. For instance, non-ladder rank faculty and the TAs talked about the challenges they face regarding unclear learning objectives for each course they are assigned, the ability to build somewhat deeper course sequences (that build on each other with earlier ones being

prerequisites for the later ones), unclear instruction as how to ensure uniformity, and last but not least the uncertainty in teaching schedules and course assignments. The specializations, in principle, should help with all these issues. Furthermore, ladder-rank faculty talked about the students lack of appropriate preparation for many of the students to participate in their labs. Again, specializations can and should alleviate this.

5. In discussing with the ladder rank faculty, many of the challenges in undergraduate teaching and education were discussed. The faculty seem to put a lot of hope that with the addition of the L(P)SOE many of these issues can be solved. The review is concerned with the perceived hope that one or two teaching faculty (likely to be fairly junior) would be able to solve important issues and fill large holes in the teaching mission. These include covering specialized topics that do not represent the research competency of the core-faculty, to show flexible teaching skills to fill-in for missing courses (and in this manner address the pressure for short time to degree in face of the need for building deeper knowledge domain) and, significantly, to provide leadership in the development and supervision of a cohesive undergraduate curriculum. We really invite faculty to acknowledge the limits of the LPSOE model in doing all that should be done by a concerted and thoughtful departmental effort.
6. Under-utilization of TAs. Although the TA requirement for graduate students is high relative to what is required in other institutions (2 quarters every year), the role that the TAs perform in most courses appears to be minor: TAs attend lectures, have office hours and grade papers but do not run their own discussion sections. This gives graduate students more time for research, but, in some ways, deprives them from the experience of teaching. For the undergraduates this is also a missed

opportunity to discuss material and ideas in the context of more informal discussion sections. Discussion sections can be particularly enlightening for undergraduates in first tier research institutions such as UCSD where graduate students are at the forefront of their field. The opportunity for a unique and rich exchange between graduate students and undergraduates is therefore absent at the detriment of both. We recommend increasing the utilization of TA's but decreasing their official teaching requirements in order to preserve a workable balance between research and teaching obligations for the graduate students.

The committee would like to also recommend that the administration in collaboration with the Department try to address the following immediate and long term needs of the undergraduate program.

1. The department seems to need a lot of support and help in their recruitment and hiring efforts to address the diversity on the faculty. While the committee was encouraged by the improvement in the rate of hiring of women faculty, there was concern that the department by itself might not be in a position to remedy the issue. Instead the department should be helped significantly by the administration to move in a direction consistent with the composition of the faculty at peer institutions (and peer Departments at UCSD). In particular, the department should be enabled to bring in senior women and faculty of color using a target of opportunity recruitment model. Furthermore, the department is encouraged to bring in expertise and involvement from other units on campus to address the issue as soon as possible. This not only includes creating a sustainable conversation with the office of Vice Chancellor for Diversity, Equity and Inclusion (VC-EDI) but also the academic programs that are most close to Psychology who have excelled on the diversity front

such as Cognitive Science Department, Ethnic Studies Departments, and Critical Gender Studies Program.

2. The department is encouraged to build in outreach and mentoring programs recruiting and serving the historically underserved populations within their undergraduate program. The undergraduate student involvement via PsyChi can be augmented to address the diversity of experience especially for underrepresented minorities. More specifically, it might be valuable to formalize a (student) chapter of the California Latina/o Psychological Association (CLPA) and the Association of Black Psychologists (ABPsi). Again the Dean of Social Sciences and VC-EDI can provide further support and help to increase the effectiveness of the programs.

The Department raised the following concerns that we support

1. 20-25% of one staff member's time is being taken up scheduling and semi-supervising OSD students. The University could save overall time and resources by centralizing the scheduling and supervision of these exams at the OSD office (with multiple small rooms, one-way windows with a central person for assistance and monitoring). The Psychology staff member would rather spend the time improving the program for all students.
2. The faculty and students agree that it is disappointing that many students will graduate without having written an APA paper or some even without having read a research paper. We encourage the department to work with the administration to find resources to be able to expand the number of students that can take a course that gives them these useful tools and experiences. One possibility discussed was that graduate-led sections may provide some more of this one-on-one interaction in the larger classes as the graduate student TAs expressed a desire to offer sections.

3. The faculty have raised the issue that they feel pressured to “reduce time to degree” and that this has led to no pre-requisite structure. The committee feel that this is worrying as it means that no course can go into great depth and the courses can not build on each other to provide a deeper understanding of an area. It was noted that there is a lower division and an upper division course in social psychology and that one is not a prerequisite for the other so students who have taken the lower division course complain about the repetition. The addition of the specializations would be an ideal way to increase depth but will require careful consideration to consider the learning objectives and craft an appropriate pre-requisite structure. Without this structure, no class can go deeper than 10 weeks deep. The committee strongly believe that 10 weeks is not sufficient to establish depth in all the required areas, and some courses will need to build on others to provide sufficiently deep training. We strongly recommend that the administration reduce the pressure to decrease time to degree in favor of making the degree more worthwhile.

4. The inherently flexible Psych curriculum requires sustaining the advising efforts and resources at the current level. Given the healthy student enrollments, sustaining the advising office at the current level is compatible with the new campus “workload funding” model (which aims to match the department's budget to the workload associated with students served, research expenditure, etc). However, with the uncertainty looming over the model, the department needs assurance that this funding will not be cut.

We believe that following issues from the previous review are not sufficiently addressed so far. As mentioned in the executive summary, we are concerned about: insufficient writing in the BA and BS track (but especially disappointing in the BA track), insufficient practical training (traditional lab and programming in R), and suboptimal TA usage. The text from the previous review is below for reference.

“2. BA Track and Writing. The high student to FTE ratio, the large size of many upper division courses, and the limited possibilities for additional instructional resources such as TA's restrict the amount of writing that can be assigned in many courses. Thus in a number of upper division courses the grade is based on multiple-choice exams. The Department is well aware of this issue and has dealt with it in a variety of ways. For example, smaller courses now require a writing component as do some independent study courses. In addition, Psychology offers a number of upper division seminars limited to 25-30 students. However some students can miss these opportunities. Since the (non-honors) BA does not require a lab course, a small course with a strong writing component or an independent study resulting in written work, a student in this track could obtain a degree in Psychology without writing a research paper in the discipline. Everyone agrees this is not ideal. One possible solution would be to add to the requirements for the BA one course with a writing component. We realize this might increase the enrollment pressure in the small courses and potentially turn them into big courses where grading written assignments stretches scarce resources (but see point 4 below). The Department reported in its self-study that the upper division seminars do not always reach their enrollment capacity. On the other hand, one of the undergraduate advisers reported that in her experience there were waiting lists for the upper division seminars. Even if there are spaces available in some of these small courses, it is unlikely to be enough to accommodate the typical population of the BA track, which currently numbers over 1100. In any case we encourage the Department to look into this possibility and at the very least consider encouraging its majors to participate in the courses with an enhanced writing component.

3. BS Track and Laboratory Courses. The BS in Psychology degree currently requires at least one lab course or, alternatively, two independent study courses (199's) taken consecutively from the same faculty member and resulting in a paper. While recognizing that it can involve an excellent lab experience, we also feel that two 199's are not the equivalent of a regular lab course. Among other things, by campus regulation 199's can only be graded P/NP. For a BS degree from a department with an experimental focus, at least one lab course with a letter grade seems a minimal expectation. Looking just at the number of students in the BS track, currently 411, it appears that the Department could accommodate them without needing additional instructional personnel. We counted about six lab courses offered per year. If each could accommodate 30-35 students, or even fewer if lab courses are also offered during the summer, all majors in this track could meet the requirement in the course of a two-year period. We are aware that there are additional considerations that may make achieving this goal more difficult, such as space limitations and insufficient TA staffing. Still, we encourage the Department to consider this possibility. The next item will discuss potential ways to deal with the staffing issue. We also note in passing that requiring a lab may result in more and better-prepared students in lab based independent study courses.

4. Enhanced instructional resources through re-allocation of TA's. As already noted, limited instructional resources restrict the amount of writing that can be assigned. This difficulty also restricts the number of courses that can offer discussion sections, which are a desideratum frequently mentioned by the majors surveyed. It is also a potential complication in providing lab courses to all the BS majors. The TA's on their part report an uneven utilization of their potential in different courses. We wonder whether some changes in the allocation of TA's might alleviate these problems. For example, some of the very large (~ 500) courses receive three TA's, but do not have discussion sections and rely entirely on scantron ready multiple-choice exams. In such courses the TA's appear to function primarily as course administrators and three may not be necessary. Some of those TAs might be split into readerships resulting in double the number and allowing for grading of tests with writing components either in that course or in other courses. The departmental TAs interviewed by the

committee supported this suggestion. Also some of these TA's might be assigned to expanded lab course offerings. "